Communicable Disease Report

Hawai'i Department of Health
Communicable Disease Division

September/October 2001

Delayed Influenza Vaccine Availability for 2001-02 Flu Season

In the July 13, 2001 issue of MMWR, the Centers for Disease Control and Prevention (CDC) announced that the availability of influenza vaccine will be delayed for the 2001-02 influenza season. The delay, however, is not expected to be as great as that experienced last year. In response to this anticipated delay, the Advisory Committee on Immunization Practices (ACIP) has issued supplemental recommendations for influenza vaccine administration for the upcoming flu season. The following is a condensed version of these recommendations.

Manufacturer projections of vaccine distribution for the 2001-02 influenza season suggest that approximately 65% of the cumulative projected total influenza vaccine doses will be available for delivery by the end of October 2001. The remaining doses will be distributed in November and December. The total number of available doses of vaccine should be higher than last season, and comparable to the number of doses available in 1999.

Due to the anticipated 2001-02 influenza season vaccine delay, with large numbers of doses projected for distribution in November and December, the ACIP has developed supplemental recommendations. The goals of these recommendations are:

1) to prioritize and phase in using vaccine for the 2001-02 influenza season to ensure that persons at greatest risk for severe influenza and its complications and their health-care providers receive vaccine early in the influenza season, and

2) to increase overall protection of those at greatest risk for severe influenza and its complications as targeted in the Healthy People 2010 objectives.

Persons at high risk include:

- those aged ≥65 years,
- nursing home and other chronic-care facility residents,
- adults and children with chronic disorders of the pulmonary and cardiovascular systems including asthma,
- adults and children who required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes), renal dysfunction, hemoglobinopathies, or immunosuppression, including that caused by medications or HIV,
- children and teenagers (aged six months-18 years) who receive long-term aspirin therapy, and
- women who will be in the second or third trimesters of pregnancy during the influenza season.

Achieving influenza vaccination goals will require the combined actions of vaccine providers, the public, manufacturers, distributors and vendors, health departments, and other organizations providing vaccine.

ACIP Supplemental Recommendations for the 2001-02 Influenza season

Vaccine Providers

- *Providers should target vaccine available in September and October to persons at increased risk for influenza complications and to health-care workers.*

The optimal time for vaccinating high-risk persons is October through November. To avoid missed opportunities, vaccine should also be offered to high-risk persons when they access medical care in September, if vaccine is available. Vaccinating high-risk persons early can be facilitated through reminder and recall systems, in which such patients are identified and encouraged to come into the office for a vaccination-only visit. Additional information that may help providers implement a reminder/recall system is available at http://www.cdc.gov/nip/flu.

- *Beginning in November, providers*

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Delayed Influenza Vaccine

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should offer vaccine to contacts of high-risk persons, healthy persons aged 50-64 years, and any other persons wanting to reduce their risk for influenza.

- *Providers should continue vaccinating patients, especially those at high-risk and in other target groups, in December and should continue as long as there is influenza activity and vaccine is available.*

To increase vaccination rates, health-care organizations are encouraged to assess their providers' influenza vaccine use and provide feedback on coverage among persons aged ≥65 years and other high-risk patients.

Other Organizations

- *Organizers of mass vaccination campaigns not in workplaces (e.g., at health departments, clinics, senior centers, and retail stores) should plan campaigns for late October or November or when they are assured of vaccine supply and make special efforts to vaccinate elderly persons and those at high risk for influenza complications.*
- *Influenza vaccine service providers should develop contingency plans for possible delays in vaccine distribution.* In a delay or shortage, communication among partner organizations and potential redirection of vaccine to high-risk persons in the community will be important. The Department of Health (DOH) can provide guidance appropriate for the State's population and systems of care.

Figure 1.
Distribution of Circulating Respiratory Viruses
2000-01 Influenza Surveillance Season

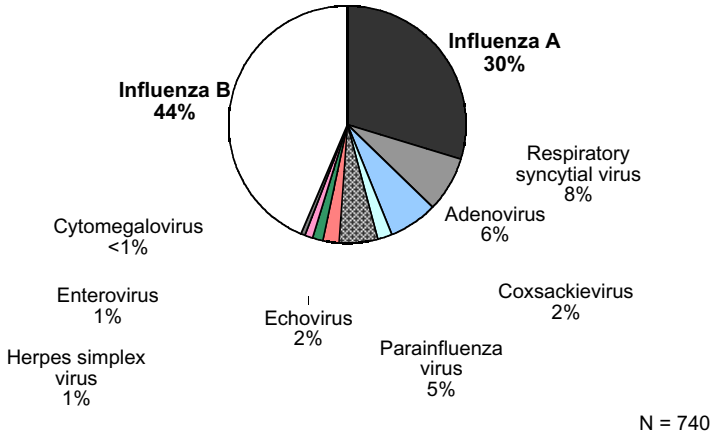
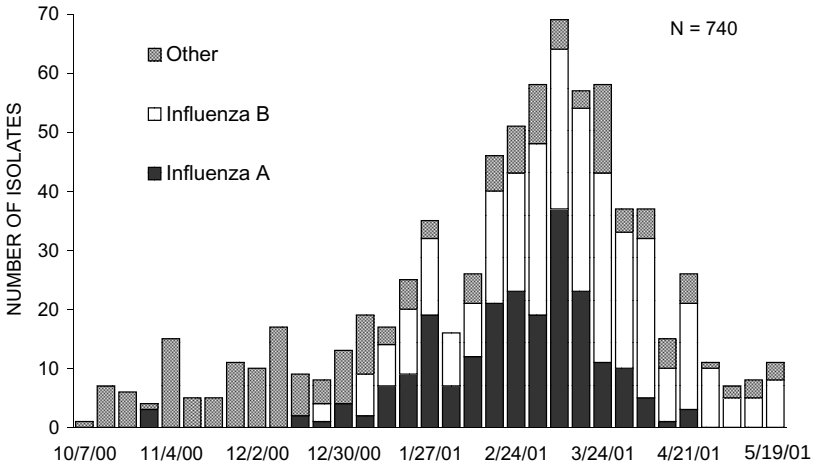


Figure 2.
Respiratory Viruses Isolates: 2000-01 Influenza Surveillance Season



Hawai`i Influenza Surveillance: 2000-2001

Figures 1 and 2 show positive culture results from specimens collected from patients with upper respiratory illness (URI). Seven hundred and forty (740) virus isolates from URI were reported to the DOH between October 1, 2000 and May 19, 2001. Influenza A and B viruses constitute the most common isolates with 30% and 40% respectively.

There were 219 Influenza A and 322 influenza B virus isolates reported. Information on subtyping and antigenic characterization was available for 356 isolates including 17 A/Panama/2007/99-like (H3N2), 144 A/New Caledonia/20/99-like (H1N1), 4 B/Sichuan/379/99-like and 191 B/Yamanashi/166/98-like Strains.

Current surveillance data is available on the DOH website at www.hawaii.gov/doh/resource/comm_dis/flu/index.htm.

For More Information

As preparation for the 2001-02 influenza

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Communicable Disease Division	586-4580
Epidemiology Branch	586-4586
Tuberculosis Disease Control Branch	832-5731
Hansen's Disease Control Branch	733-9831
STD/AIDS Prevention Branch	733-9010
STD Reporting	733-9289
AIDS Reporting	733-9010
Information & Disease Reporting	586-4586
After-hours Emergency Reporting	247-2191 (State Operator)
After-hours Neighbor Island Emergency Reporting	800-479-8092

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Dengue Alert in the Pacific and Southeast Asia

Between July 23 and August 10, the Department of Health (DOH) received reports of 10 possible cases of dengue fever from patients recently returned from trips to the Society Islands and American and/or Western Samoa. Of the 10, four were serologically positive for dengue fever; two from American and Western Samoa, and two from Tahiti in the Society Islands. Serologic test results on two patients recently returned from American Samoa and two from Tahiti are pending. Two patients tested negative on single samples: one who visited American and Western Samoa and one who vacationed in Tahiti.

Through August 10, there have been an estimated 27,000 cases of dengue in the Society Islands since late January 2001, for an incidence of 14/100 (source: PACNET). However, the governments of American and Western Samoa have not released any surveillance data regarding the outbreaks in their respective countries.

A. albopictus taking a blood meal.

Earlier this year, three individuals were confirmed with dengue infections, including a man with dengue hemorrhagic fever who was exposed in the Philippines. The two other cases were exposed in the Philippines and in Indonesia.

Dengue fever is not indigenous in Hawai`i. It was present here during World War II but was subsequently eradicated. However both *Aedes* mosquito species known to transmit the disease are present in Hawai`i. *A. albopictus* (see photo) is ubiquitous throughout the state, while *A. aegypti* is found in pockets on the Big Island (Kona), Moloka`i and Lana`i.

Dengue fever is an acute febrile viral disease with worldwide distribution in tropical and subtropical countries. The disease periodically occurs in epidemic proportions. It is transmitted by *Aedes* mosquitoes, primarily *A. aegypti* and *A. albopictus.* Following a 3-8 day incubation period, typical clinical presentation includes high fever, retro-orbital headache, chills, backache, malaise, musculoskeletal pain and a transient macular rash. Thrombocytopenia, leukopenia and elevated hepatic enzymes are commonly seen. Duration of illness is usually 5-7 days. Laboratory confirmation is by a fourfold rise in IgG ELISA titers between acute and convalescent samples drawn ≥14 days apart. Single, positive IgM titers are presumptive evidence of a recent infection.

Dengue fever is a notifiable disease in Hawai`i. Primary care physicians suspecting dengue should **telephone** the DOH with their provisional diagnosis. Because of the presence of known vectors in the state, there is a possibility of infected patients being a source of the virus for local mosquitoes. If notified during the first week of illness (during the viremic stage), the DOH sends out vector control crews for mosquitoes control in the areas frequented by the patients. This will limit the potential entry of the virus into the local mosquito and subsequent human population.

Health care providers should consider dengue fever in patients presenting with acute febrile illnesses following a trip from American and/or Western Samoa or the Society Islands. Providers should also counsel patients planning travel to American or Western Samoa and the Society Islands regarding personal protection activities to minimize mosquito exposure.

Physicians are also requested to split the diagnostic samples, sending one half to their clinical diagnostic laboratory and the other half to the Centers for Disease Control & Prevention (CDC) via the DOH. A few years ago, the DOH received a false positive result from a commercial laboratory in a resident with no travel history. The CDC subsequently confirmed that the sample was negative for dengue fever.

For more information, please contact the DOH Epidemiology Branch at (808) 586-4586 in Honolulu, (808) 933-0912 on Hawai`i, (808) 984-8213 on Maui, (808) 241-3563 on Kaua`i, or the Vector Control Branch in Honolulu at (808) 831-6767.

Submitted by David M. Sasaki, D.V.M., M.P.H., Veterinary Medical Officer, Epidemiology Branch.

Delayed Influenza Vaccine

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season proceeds, updates on vaccine supply, and other information about influenza vaccination will be available at http://www.cdc.gov/nip/flu. For further information, please call the Hawai`i Immunization Program at (808) 586-8332 in Honolulu.

Reference:
Centers for Disease Control and Prevention. Delayed Influenza Vaccine Availability for 2001-02 Season and Supplemental Recommendations of the Advisory Committee on Immunization Practices. *MMWR*,2001;50(No. 27):582-585.

Submitted by Judy Strait-Jones, M.P.H., M.Ed., Public Health Educator, Hawai`i Immunization Program, Epidemiology Branch, Alice Ieong, M.P.H., Epidemiological Specialist, Investigations Section, and Tammy Tom, M.A., M.S., Biostatistician, Bioterrorism Preparedness Group, Epidemiology Branch.

Ciguatera Fish Poisoning: A Five-Year Review

Ciguatera fish poisoning is an intoxication resulting in characteristic gastrointestinal and neurologic symptoms following ingestion of warm water coral reef fish containing ciguatoxins.

The Toxin

Ciguatera poisoning is the most common cause of fish poisoning worldwide, and is found in tropical and subtropical waters. Ciguatoxins are produced by a marine dinoflagellate, *Gambierdiscus toxicus.* They are lipid-soluble, polyether toxins, the most potent sodium ion channel activators known, causing cell membrane excitability and instability. The toxins originate from dinoflagellates found on marine algae usually attached to dead coral reefs. They are ingested by herbivorous reef fishes and move up the food chain to larger carnivorous fishes. The toxins accumulate in the fish and are concentrated up to 50-100 times in parts of the fish such as the liver, gastrointestinal tract and roe. Ciguatoxins increase in potency as they pass through the marine chain. They do not affect the appearance, texture, smell or taste of the affected fish, and are not destroyed by gastric acid, cooking, canning, drying, freezing, smoking, salting or pickling. Open ocean pelagic fishes (e.g. tuna, mahimahi) have not been associated with ciguatera poisoning.

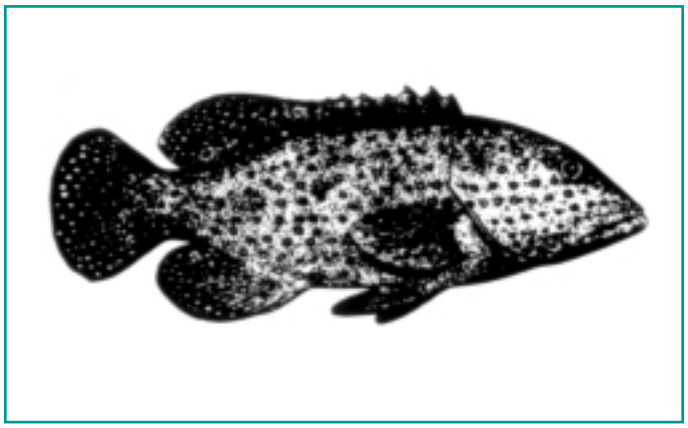
Factors Affecting Susceptibility

Disturbances to reef systems and the subsequent proliferation of toxic dinoflagellates have been associated with increased incidence of ciguatera poisoning in humans 6-24 months following such natural or manmade activities as hurricanes, tidal waves, heavy rains, or coastal dredging projects.

Other factors influencing the severity of ciguatera poisoning include:

- the amount of fish eaten,
- consumption of parts of fish known to contain high levels of ciugatoxin (e.g. liver, intestines, roe), and
- previous exposure to ciguatera, probably the result of accumulation of toxin or immune sensitization.

Excretion of ciguatoxins from fish is slow, with an indicated half-life of 264 days.



Roi - The fish most commonly associated with Ciguatera.

Epidemiology in Hawai`i: 1996-2000

Between 1996-2000, 126 incidents involving 214 cases of ciguatera poisoning were reported to the Department of Health (DOH). Annual case counts ranged from 20 to 57. The mean annual incidence rate was 3.6/100,000 population.

In the 1970's, the amberjack (kahala) was the fish most frequently associated with ciguatera poisoning. From 1975-1981, kahala was responsible for 21% of ciguatera incidents reported to the DOH. Subsequently, amberjacks were excluded from commercial markets by retailers and restaurants. Between 1996-2000, 18 families of reef fishes were implicated in poisoning incidents. The nine most common groups are shown in Table 1. The implicated fish were purchased in 10 (8%) of the 126 incidents; the rest were recreationally caught.

By island, O`ahu accounted for 56 (44%) incidents, followed by Kaua`i with 26 (21%, Maui with 23 (18%) and Hawai`i with 18 (14%). Two incidents were reported from Moloka`i and one from Lana`i. By location, west O`ahu, the north shore of Kaua`i, west Maui and the Kona coast of the Big Island respectively were the areas associated with the majority of cases on each island.

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Table 1. Most common fishes associated with Ciguatera Poisoning
Hawaii: 1996-2000
Incidents = 126

Common Name	Hawaiian Name	Feeding Habit	No.	Percent
Sea Bass	"Roi," Hapuupuu	Carnivorous	21	17
Jack	Ulua/Papio	Carnivorous	20	16
Surgeon Fish	Kala, Manini, Pakuikui, Palani, Pualu	Herbivorous	18	14
Surgeon Fish, Other	Kole	Herbivorous	16	13
Goat Fish	Kumu, Moana, Weke	Omnivorous	10	8
Snapper	Opakapaka, Uku,Wahanui	Carnivorous	9	7
Barracuda	Kaku	Carnivorous	4	3
Moray Eel	Puhi	Carnivorous	4	3
Mullett	Amaama	Carnivorous	4	3
Total			**106**	**83**

Ciguatera Fish Poisoning

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Through July 31, 2001, 16 incidents involving 33 cases have been reported this year. Kaua`i has seen the most incidents with nine (16 cases), including five in July.

The Disease

Illness usually occurs 1-3 hours after ingestion of affected fishes, but onset may be delayed as long as 30 hours. Most symptoms resolve in 1-4 weeks.

A. **Gastrointestinal.** The earliest symptoms are gastrointestinal and may last 1-2 days. Symptoms (40-75% of cases) include nausea, vomiting, diarrhea and abdominal pain.

B. **General.** General symptoms include profound weakness, chills, sweating, arthralgia, myalgias and a metallic taste. Pruritus, particularly involving the palms and soles, typically occurs 2-5 days after ingestion of the toxic fish.

C. **Neurologic.** Nervous system involvement usually follows gastrointestinal symptoms and may be delayed for up to 72 hours. They may persist for months or years. Symptoms include paresthesias involving the extremities, tongue, throat and perioral area, and paradoxical dysesthesias such as temperature reversal. Temperature reversal, where cold objects feel hot and hot objects feel cold, is characteristic of ciguatera poisoning. However, it is not pathognomonic since it may also occur in neurotoxic shellfish poisoning. Tooth pain and numbness have been reported in about 33% of cases. Visual symptoms, including blurred vision and transient blindness, are also seen. Chronic neuropsychiatric symptoms include malaise, depression, headaches, myalgias and fatigue.

D. **Cardiac.** In more severe cases, patients may develop bradycardia, tachycardia, and other arrhythmias. Hypotension without hypovolemia has been described, as has hypertension. Cardiac effects may be serious but usually resolve within five days of onset. An investigation of an outbreak on Kaua`i showed statistically-significant associations between bradycardia and increasing age and body weight, and with the amount of toxic fish consumed. The same study also showed a correlation between increasing duration of illness with increasing age and weight of the patients.

E. **Death.** Fatalities are rare. The only known fatalities (2) due to ciguatera poisoning in Hawai`i occurred in 1964. Death is usually the result of respiratory or cardiac failure, and is most common in those who have eaten the viscera of fish. Case fatality rates in other areas have ranted from 0.1-1.0%.

Diagnosis

A. **Human.** There is no diagnostic test for ciguatera fish poisoning in humans. The DOH uses a clinical case definition: a person experiencing both gastrointestinal and paresthetic symptoms within 30 hours of consumption of tropical reef fish.

B. **Fish.** A membrane immunobead assay (MIA) for detecting ciguatoxin and related polyethers directly from fish tissue was developed in Hawai`i and is available commercially. It has a sensitivity of 92% and a specificity of 86%. A test kit including 5 tests is available on retail stores on most islands, and by mail for those outside Hawai`i. Information on the test and retailers carrying the test are available on the company's internet website, www.cigua.com.

Treatment

Treatment is primarily supportive. Intravenous mannitol (1 g/kg of a 20% solution over 30 minutes) may dramatically reduce the severity and duration of neurologic symptoms, particularly if given within the first 24 hours of poisoning. It should be used with caution and only after ensuring adequate hydration. Its mechanism of action is thought to reverse axonal membrane excitability and swelling of nodes of Ranvier brought on by the action of ciguatoxin. A double-blind clinical evaluation has not been published on the effect of mannitol in ciguatera poisoning, although several reports documenting its efficacy are in the medical literature.

Dietary restrictions during recuperation include avoiding consumption of reef fish, fish sauces, shellfish, alcoholic beverages, nuts and nut oils for 1-3 months following the illness, since these foods may provoke recurrent symptoms.

Prevention

1. The viscera and head of reef fishes should not be consumed or used in fish soup.
2. Consumption of large predatory reef fish (>6 lbs) should be avoided, as should known high risk fish - such as ulua, kahala, roi, kole, barracuda and moray eels, unless first screened with the ciguatera test kit.
3. Persons with a history of previous ciguatera poisoning should test reef fishes prior to consumption. The toxic threshold in a previously intoxicated person is likely to be lower due to accumulation of the toxin in the body or to immune sensitization.

Reporting

Ciguatera poisoning is a notifiable disease in Hawai`i. Physicians should report cases by telephone after a provisional diagnosis is made. All cases are investigated by the Epidemiology Branch.

For reporting and more information, please contact the DOH at (808) 586-4586 on O`ahu, (808) 933-0912 on Hawai`i, (808) 984-8213 on Maui and (808) 241-3563 on Kaua`i.

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DOH Adopts New Leptospirosis Screening Test

In August, the Department of Health (DOH) Laboratories Division began using a new leptospirosis rapid screening test as a service to local physicians: the PanBio InDx® IgM Dip-S-Ticks® (DST) Leptospirosis test. This rapid screening test replaced the Indirect Hemagglutination Assay (IHA) which was used by the DOH since 1992. The DST test was approved by the Federal Drug Administration in 2000.

Sensitivity

In a recent evaluation of eight screening tests conducted by the DOH, the IHA had the lowest sensitivity, while the DST test's sensitivity was among the highest. It's overall sensitivity was double that of the IHA. This should provide more helpful early diagnostic information to physicians in identifying cases of leptospirosis.

It should be recognized that IgM antibodies take 3-10 days to be detectable in patient sera. In the DOH study, the median number of days after onset of the acute samples was four (4). In the study, the DST's sensitivity was the highest during week two (7-13 days) of illness, while the IHA's sensitivity was highest during week three following onset of illness. As a result, submission of paired samples drawn ≥2 weeks apart are important for screening, as well as for serologic confirmation as determined by the Microscopic Agglutination test conducted by the Centers for Disease Control and Prevention.

Specificity

The DST's specificity was slightly lower than that of the IHA (95% vs. 99%). During the study, there were 10 false positive results on acute samples. However, four of the 10 predicted subsequent seroconversion.

Leptospiras magnified 11,000 times.

Culture

Isolation from blood culture is confirmatory; however the overall sensitivity is lower than that of serology and incubation periods of positive cultures in Hawai`i have ranged from 3-63 days. The DOH laboratory provides semi-solid EMJH leptospira culture media to clinical laboratories and will incubate and examine the cultures. The prepared media has a shelf life of 90 days. The DOH recommends both serology and blood culture to maximize the sensitivity of diagnosis of leptospirosis.

Clinical Summary

Leptospirosis should be considered in patients presenting with any febrile illness associated with an abrupt onset, severe myalgias and severe headache, especially in those who have had animal, fresh water or mud exposure during the previous 21 days. Additional acute manifestations may include nausea, vomiting, abdominal pain, diarrhea or constipation and conjunctival suffusion. In the second week of illness, clinical signs referable to meningitis, hepatitis, pulmonary hemorrhage or acute renal failure may be evident. Fatalities are uncommon in Hawai`i, but patients who succumb usually expire from renal failure. Patient recovery is usually complete.

For more information, call the DOH Medical Microbiology Branch of the State Laboratories Division at 453-6706 or the Epidemiology Branch at 586-4586 on O`ahu.

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Submitted by David M. Sasaki, D.V.M., M.P.H., Veterinary Medical Officer, Epidemiology Branch.

Ciguatera Fish Poisoning

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Submitted by David M. Sasaki, D.V.M., M.P.H., Veterinary Medical Officer, Epidemiology Branch.

A Tribute to Dr. Reichert

Dr. Erida Reichert Klemmer was chief of the Emergency Health Branch, Department of Health in the 1970's and was responsible for the Hansen's Disease (H.D.) Program from 1979-1994. Dr. Reichert was a graduate of Johns Hopkins School of Medicine and trained in internal medicine at the Queen's Medical Center. She died on June 4, 2001.

Those of us who had the opportunity of working with her remember her dynamic personality as an advocate for the patients rights and the removal of social stigma associated with Hansen's disease. Based on her constant review of research literature and professional contacts with the National Hansen's Disease program, Hawai`i instituted multidrug therapy in 1979-80, earlier than most programs. Multidrug therapy is the approach now used worldwide to stop transmission, prevent complications and cure the disease.

Concerned about foot complications, she recruited a foot biomechanics specialist from the National Institutes of Health to spend some years in Hawai`i. The specialist assessed the feet of nearly all Hansen's disease patients and worked with rehab/prosthesis providers in the State. This contribution has been helpful not only to H.D. patients but to all people with insensitive feet. At a politically sensitive time for H.D. in Hawai`i, Dr. Reichert recruited Dr. Oliver Hasselblad, a world renowned leprologist to be the resident physician in Kalaupapa Settlement.

Dr. Reichert is also credited for being one of the key persons involved in the conception of the Hansen's Disease Community Program. From 1982 new diagnosed patients were treated by community-based physicians (primary care doctors and dermatologists) and supported by public health nurses and social workers.

She would want us to thank all those physicians who were and are involved in providing care to these patients. During the early 1980's there were limited resources available to pay for the program.

It was a labor of love of all concerned as physicians received only $4-$6 per patient visit. Recognizing the sacrificial service being given by her colleagues, Dr. Reichert often hosted social dinners in her home, inviting those who were providing the care and thus pioneering this community-based approach to H.D. prevention and treatment.

Her contributions to the care of H.D. patients in Hawai`i has been great. We will miss her and will always remember her.

Submitted by Mona R. Bomgaars, M.D., M.P.H., Chief, Hansen's Disease Control Branch.

Receive Health Alerts Immediately

Currently, the State of Hawaii Dept. of Health, Epidemiology Branch sends important health alerts through the mail. However, with new issues, such as Bioterrorism, or other infectious diseases, the Centers for Disease Control and Prevention (CDC) is funding the Department to establish an interactive broadcast fax and e-mail system to send, in a matter of hours, health alerts.

This system will also allow practitioners to send electronic messages back in response. Participation is **voluntary** and your email information will be reserved for emergencies only and will never be shared or "sold" for any reason. If you choose to remove your information from the Dept. of Health, Epidemiology Branch you can do so at any time by sending your request to the email address listed below. To be placed on our list for key health alerts, please provide the following information:

Name: _____
Telephone: _____
Fax Number: _____
Email Address: _____
Specialty: _____

If you want to want to receive a CDR and currently do not receive one, or you have had a recent address change, please include your mailing address:
Address:_____
City: _____State: _____ Zip:_____

Please return this completed memo via either:
Fax at **(808) 586-8302** (Dept. of Health, Epi. Branch Fax)
Email to: **epi1@mail.health.state.hi.us** (Dept. of Health, Epi Branch email address)

Thank you for your cooperation.

Submitted by the Bioterrorism Response Unit, Epidemiology Branch

Notifiable Disease Summary, Hawaii—1996-2000

SUMMARY OF REPORTED CASES OF NOTIFIABLE DISEASES HAWAI`I, 1995 - 2000

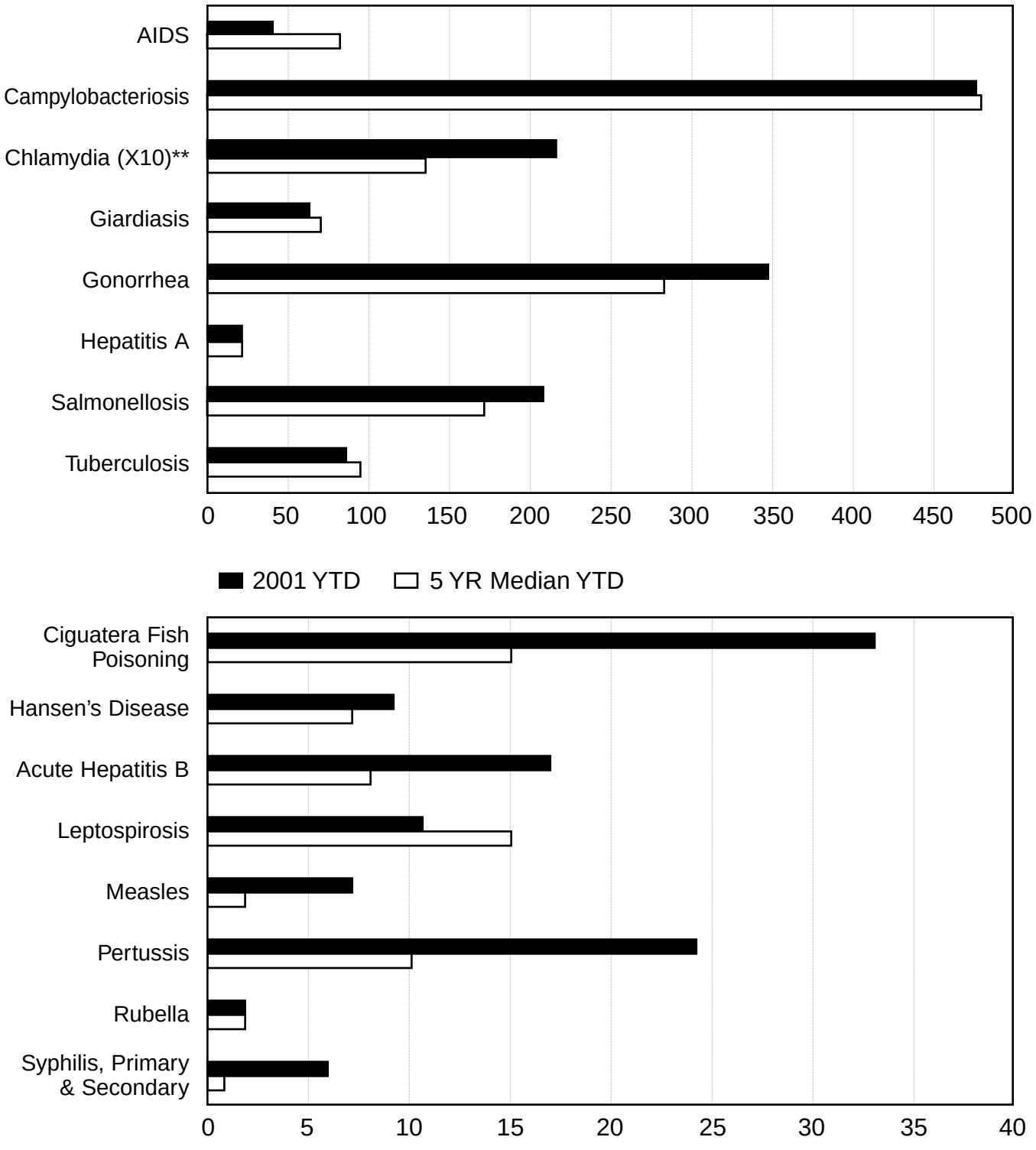
DISEASE/YEAR Total Resident Population July 1st est., 1996-1999	1996 1,187,283	1997 1,192,057	1998 1,193,001	1999 1,185,497	2000 1,185,497
	No. of Cases	No. of Cases	No. of Cases	No. of Cases	No. of Cases
AIDS	192	99	167	103	108
AMEBIASIS	27	22	14	23	33
ANTHRAX	0	0	0	0	#1
BOTULISM, FOODBORNE	0	0	0	0	0
BOTULISM, INFANT	2	2	0	0	2
BRUCELLOSIS	2	3	0	2	1
CAMPYLOBACTERIOSIS	854	823	622	884	834
CHLAMYDIA	1838	1798	2603	3167	3567
CHOLERA	0	0	0	1	0
CRYPTOSPORIDIOSIS	1	1	3	0	0
DENGUE FEVER	2	8	6	1	0
DIPHTHERIA	0	0	0	0	0
E. COLI 0157:H7	8	11	19	15	14
ENTEROCOCCUS, VANCOMYCIN RESISTANT*	0	2	103	102	93
FILARIASIS	0	1	1	1	1
FISH POISONING, CIGUATERA	15	57	69	43	37
FISH POISONING, SCOMBROID	28	35	36	41	53
GASTROENTERITIS, FOODBORNE	57 (OUTBKS)	67 (OUTBKS)	74(OUTBKS)	27(OUTBKS)	9(OUTBKS)
GIARDIASIS	229	162	123	117	105
GONORRHEA	501	507	506	463	484
HAEMOPHILUS INFLUENZA (invasive disease)	1	8	10	15	25
HALLUCINOGENIC FISH POISONING	0	0	6	0	2
HANSEN'S DISEASE	15	26	19	22	15
HANTAVIRUS	0	0	0	0	0
HEPATITIS A	120	148	54	24	22
HEPATITIS B (ACUTE)	14	11	18	16	15
HEPATITIS C (ACUTE AND CHRONIC)	216	182	1036	1808	2209
INFLUENZA (& Infl-Like Illness)	129	1051	1290	985	503
LEGIONNELOSIS	5	2	1	1	1
LEPTOSPIROSIS	42	60	46	52	Pending
LISTERIOSIS	1	5	6	7	4
MALARIA	12	13	9	12	10
MEASLES	51	6	1	2	6
MENINGITIS, H. Influenza	0	0	0	0	0
MENINGITIS, MENINGOCOCCAL	8	7	5	10	8
MUMPS	31	27	26	16	23
PERTUSSIS	35	19	26	51	41
PLAGUE	0	0	0	0	0
PNEUMOCOCCAL DISEASE	98	52	81	61	160
POLIOMYELITIS	0	0	0	0	0
PSITTACOSIS	0	0	0	0	0
RABIES	0	0	0	0	0
RUBELLA (GERMAN MEASLES)	3	9	2	0	0
RUBELLA, CONGENITAL	0	0	0	0	0
SALMONELLOSIS	428	387	295	338	237
SHIGELLOSIS	87	65	51	35	38
STREPTOCOCCAL INFECTIONS *	163	106	35	28	37
SYPHILIS, PRIMARY & SECONDARY	4	1	4	3	2
SYPHILIS, EARLY LATENT	2	0	0	3	3
SYPHILIS, LATENT & LATE LATENT	30	41	11	6	17
TETANUS	0	0	0	0	0
TOXOPLASMOSIS	2	0	1	2	2
TRICHINOSIS	0	0	0	0	1
TUBERCULOSIS	200	167	181	184	136
TYPHOID FEVER	9	7	4	0	6
TYPHUS, MURINE	5	3	9	2	5
VIBRIOSIS	19	16	15	14	18
YELLOW FEVER	0	0	0	0	0
YERSINIOSIS	9	17	7	10	7

*Non-Pharyngitis/Group A invasive beta-hemolytic Streptococci and TSS due to Streptococci.

A suspected cutaneous case of imported anthrax

Communicable Disease Surveillance

Selected Diseases by Date of Report*
Hawai'i, 2001 Year-to-date Through July



* These data do not agree with tables using date of onset or date of diagnosis.
** The number of cases graphed represent 10% of the total number reported.

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HAWAI'I STATE DEPARTMENT OF HEALTH

Communicable Disease Report

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September/October 2001

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